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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/542,010

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Jun Fujita

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EXAMINER

GUGLIOTTA, NICOLE T

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

03/19/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/542,010	Applicant(s) FUJITA ET AL.	
	Examiner NICOLE T. GUGLIOTTA	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 – 5 and 7 – 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamada (EP 1101910 A1, submitted by Applicant in 7/5/2005 IDS).

4. In regard to claims 1 and 4, a honeycomb structure for carrying a catalyst to be used in exhaust gas purification (Section [0001]), comprising a plurality of honeycomb segments joined by a bonding material (Section [010]). The outer walls of these honeycomb segments are uneven and undulating, and the degree of "flatness" (undulation) is 0.2 - 1.5 mm (Sections [0011] - [0012]).

The dictionary defines "protrusion" as a "something that bulges out or is protuberant or projects from its surroundings". An outer wall with an uneven surface (undulation) would inherently have a portion which bulges out relative to another

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portion. Therefore, Examiner interprets the undulation of the outer wall of each honeycomb segment as a “protrusion” of 0.2 – 1.55 mm.

In regard to the limitation of claim 4, Examiner considers the joining of the honeycomb segments with a bonding material disclosed by Yamada (Section [0024]) to be the same as “pressing the two honeycomb segments against each other, with the adhesive layer in between”.

5. In regard to claim 2, the “protrusion portions” of Yamada’s honeycomb segments are made from the outer wall of the honeycomb segment, and Yamada discloses the honeycomb segments comprises one of the following: cordierite, SiC, SiN, alumina, mullite, and lithium-aluminum silicate (LAS) (Section [0014]).

6. In regard to claims 3 and 7, Yamada discloses a undulation (protrusion) of 0.2 - 1.55 mm and a bonding material thickness of 1.5 - 3 mm (depending on flatness) (Section [0024]). Taking the undulation (protrusion) and bonding later into consideration, the total thickness between adhesion surfaces is in the range of 1.7 – 4.55 mm.

7. In regard to claim 8, Yamada discloses in Example 1 a bonding material thickness of at least 1.5 mm. Therefore, it would be reasonable to assume the undulating surfaces of honeycomb segments are not in contact with the adhesion

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surface of the opposing honeycomb segments due to the presence of at least 1.5 mm of bonding material in between.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 5, 6, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada.

10. In regard to claim 5, Yamada discloses (Example 1) a honeycomb consisting of 8 segments, each segment with a different flatness: 0.05 mm, 0.1 mm, 0.15mm, 0.2 mm, 0.3 mm, 0.6 mm, 1 mm or 1.5 mm. All the segments, with the exception of the segment of 0.05 mm flatness, were manufactured with undulating walls by pressing a board having unevenness against the outer wall of the segments (Section [0023]).

Examiner considers the honeycomb segment with a flatness of 0.05 mm to be "flat" because it has not been altered with undulations/protrusions like the other segments. When this "flat" honeycomb segment is brought together with the other honeycomb segments to create a honeycomb structure, the "flat" honeycomb segment will be bonded through a bonding material to at least two other honeycomb segments having outer walls with larger protrusions (larger undulating thickness). This will create

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a ceramic honeycomb in which protrusion portions are present on a first adhesion surface and the second adhesion surface (the “flat” segment) is flat.

11. In regard to the application of the bonding material to the ceramic members (honeycomb segments) in claims 5 and 6, Yamada is silent in regard to how many surfaces the bonding material is applied to before joining the honeycomb segments together. However, joining surfaces with an adhesive is shown by Yamada to be known, and there are only 2 methods possible: (a) applying the bonding material to the surface of one ceramic member, or (b) applying the bonding material to the surface of both ceramic members. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the bonding material by either method.

12. In regard to claim 9, Yamada discloses in Example 1 a bonding material thickness of at least 1.5 mm. Therefore, it would be reasonable to assume the undulating surfaces of honeycomb segments are not in contact with the adhesion surface of the opposing honeycomb segments due to the presence of at least 1.5 mm of bonding material in between.

Response to Arguments

13. Applicant’s arguments, see After Final Remarks, filed March 9, 2009, with respect to the rejection(s) of claim(s) 1 - 9 under 35 U.S.C. 102(a) and 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been

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withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Yamada.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NICOLE T. GUGLIOTTA whose telephone number is (571)270-1552. The examiner can normally be reached on M - F 8:30 - 6 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Sample can be reached on 571-272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/
Supervisory Patent Examiner, Art Unit 1794

NICOLE T. GUGLIOTTA
Examiner
Art Unit 1794